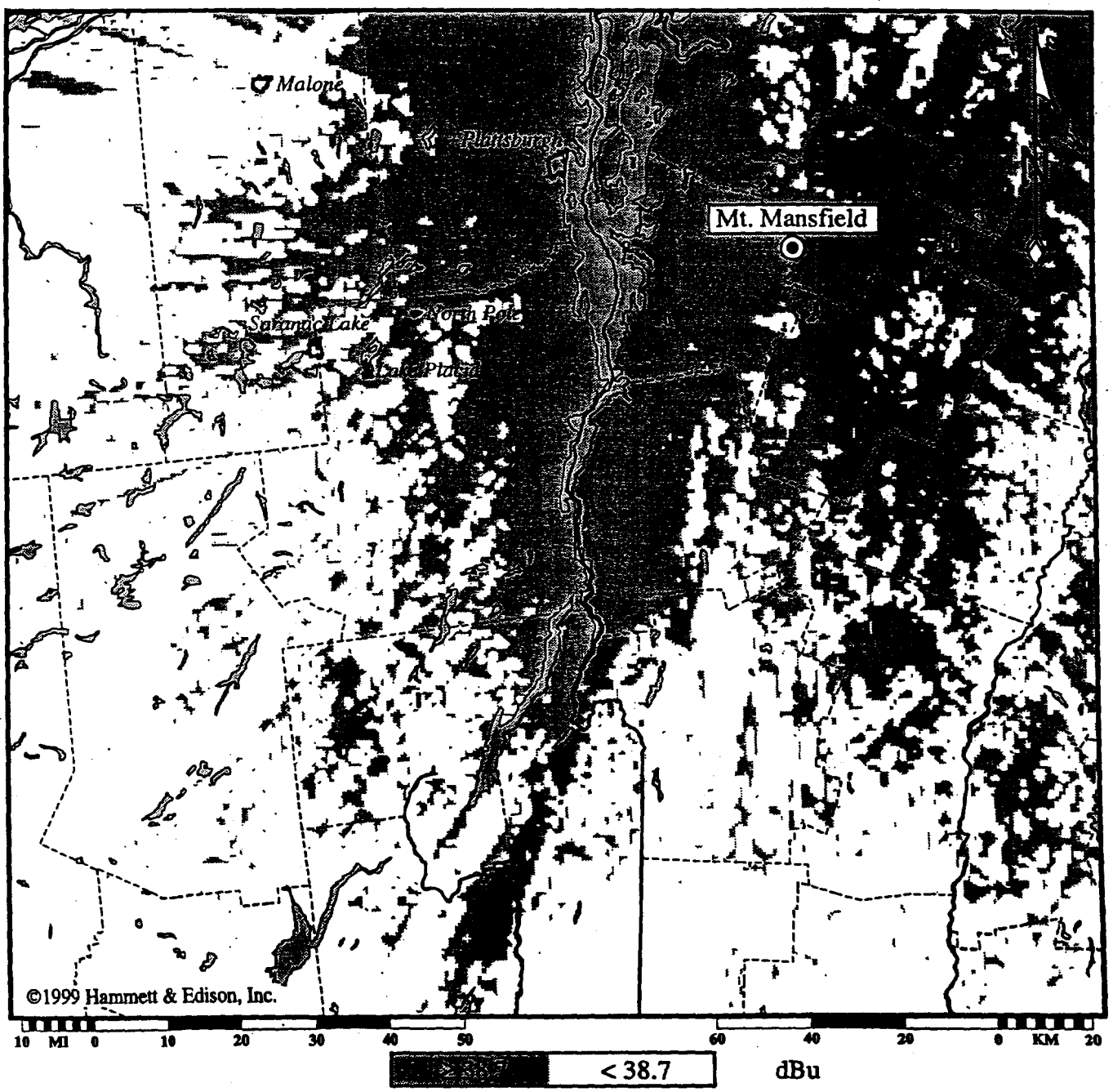
Mt. Mansfield Television, Inc. • Burlington, Vermont

Terrain-Sensitive Coverage
of Hypothetical WPTZ-DT Facilities at Mt. Mansfield
DTV Channel 14, 365 kilowatts, 1,265 meters AMSL



Based on proprietary implementation of the JSC Terrain Integrated Rough Earth Model propagation algorithm using 3-second USGS digitized terrain data. Map data taken from Sectional Aeronautical Charts, published by the National Ocean Survey. City limits shown taken from 1995 U.S. Census Bureau TIGER data.

HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

990818
Figure 2

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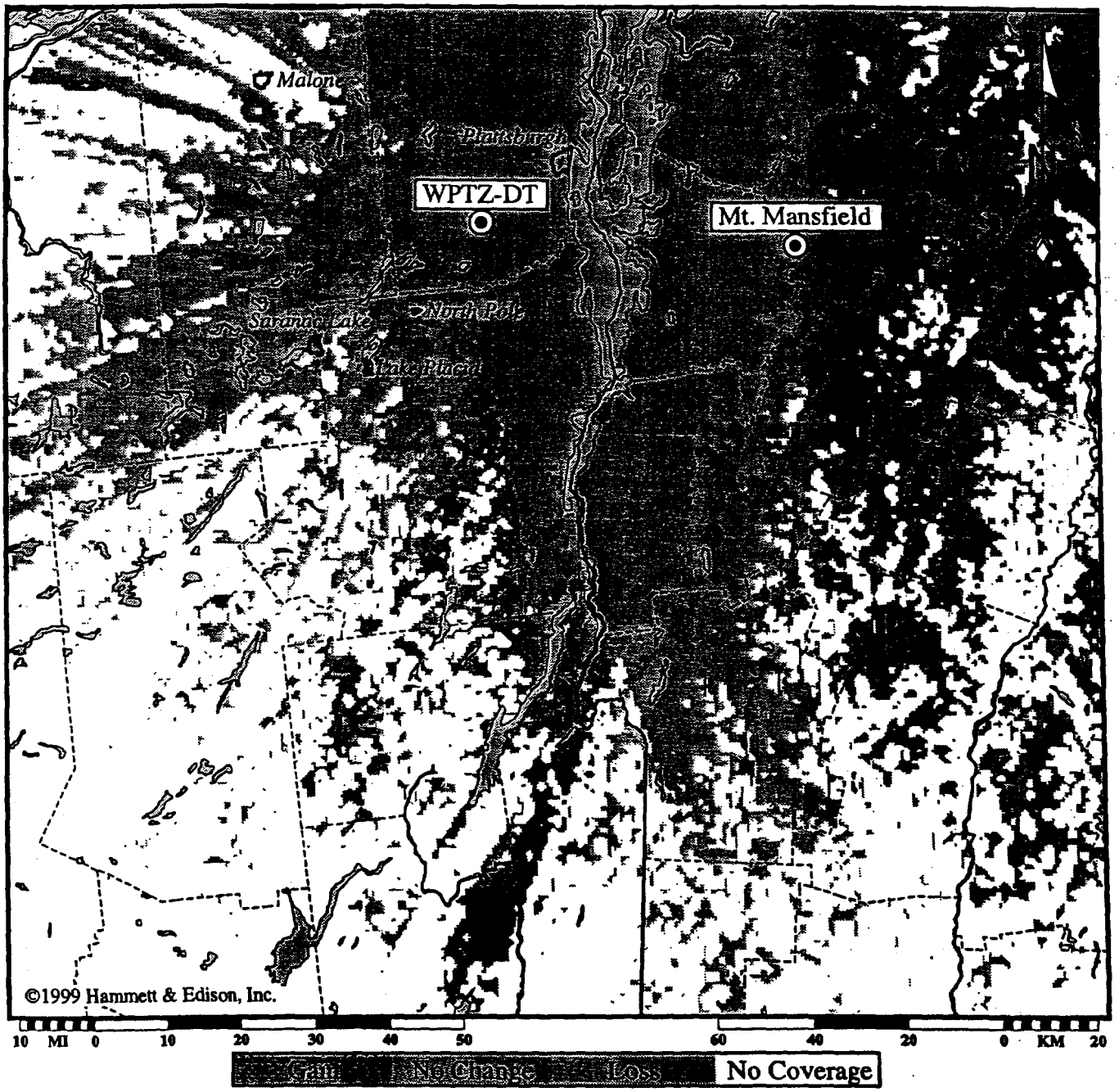
Terrain-Sensitive Coverage Difference
WPTZ-DT Allotted (Terry Mountain) vs. Hypothetical (Mt. Mansfield) Facilities



Based on proprietary implementation of the JSC Terrain Integrated Rough Earth Model propagation algorithm using 3-second USGS digitized terrain data. Map data taken from Sectional Aeronautical Charts, published by the National Ocean Survey. City limits shown taken from 1995 U.S. Census Bureau TIGER data.

About This Type of Map

The coverage of TV stations is greatly affected by the nature of the terrain in which the station is located. In flat or gently rolling country, coverage extends approximately the same distance in all directions and is controlled mainly by the power radiated and the height of the transmitting antenna. In such smooth terrain, the simple method of predicting coverage used by the FCC for over forty years provides useful and reasonably accurate maps of coverage. However, for stations located in rough terrain, the FCC-style maps fail to provide a meaningful measure of TV coverage.

To prepare coverage maps that realistically predict coverage, Hammett & Edison, Inc., developed a complete system to determine and show the actual effects of terrain on coverage. This system uses the sophisticated propagation algorithm called the Terrain Integrated Rough Earth Model ("TIREM"), developed at the Joint Spectrum Center (JSC, formerly ECAC) in Annapolis, Maryland. TIREM uses detailed terrain profiles to compute values of basic transmission loss from point to point. The model evaluates the profile between two sites and, based on the geometry of the profile, selects automatically the most probable mode of propagation from various knife-edge models, a rough-earth diffraction model, and line-of-sight models. When combined with the United States Geological Survey 3-second terrain database, as we have done, the TIREM model is the most accurate available means of predicting signal strength when details of terrain along the propagation path are known.

This map presentation, first copyrighted by Hammett & Edison in 1989, shows, in addition to the coverage, the locations of population centers taken directly from the 1990 Census of the United States. Each dot on the map is located at the center of each Census Block; the size of each dot is proportional to the number of persons in that Block. The concentrations of population in cities are quite apparent and in some cases even the street patterns of the cities can be discerned.

The contours shown on the attached map should not be considered as Grade A or Grade B service contours, because those are defined by the FCC Rules and apply only to calculations using the FCC's F(50,50) curves. For familiarity, the specified field intensity contours shown here may be the same as the service or protected contours. Shading or coloring is applied to the map to make the different signal levels more easily distinguished. Such maps are powerful engineering tools used in the initial design or in the improvement of a broadcast facility.

TVIXSTUDY™ Analysis Methodology

Implementation of FCC's Interference-Based Allocation Algorithm

On April 21, 1997, the Federal Communications Commission released its Fifth and Sixth Report and Order texts to Mass Media Docket No. 87-268, establishing a final Table of Allotments for the transition from analog NTSC television service to a digital television ("DTV") service. The Commission utilized a complex set of computerized analysis tools to generate the DTV allotment table and added FCC Rules Section 73.623(b)(2), requiring that similar tools be employed to analyze individual DTV station assignments with regard to their potential interference to other DTV stations, DTV allotments, and existing or authorized NTSC facilities. Those tools were described in FCC OET Bulletin No. 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference* ("OET-69"), released on July 2, 1997. Subsequent to OET-69, the Commission released, on February 23, 1998, its Memorandum Opinion and Order on Reconsideration of the Fifth [and Sixth] Report and Order[s], which made a number of changes to the previous allotment table and modified several of the analysis methods to be employed for studying DTV allotments and potential facility modifications. On August 10, 1998, the Commission published a text, *Additional Application Processing Guidelines for Digital Television (DTV)*, which provided important clarifications and enhancements to the specified analysis methods. Hammett & Edison has developed and refined the TVIXSTUDY computer software to perform FCC-style DTV allocation studies as based on OET-69, its subsequent clarifications, and also upon a detailed examination of the FCC allotment program software source code.

For most NTSC or DTV stations to be studied, the FCC analysis model first determines the location of the conventional F(50,50) Grade B contour of the NTSC station, or of the NTSC station associated with an assigned DTV station, using pattern information contained in the FCC engineering database and an assumed antenna elevation pattern. The model assumes that contour as an envelope, outside of which no protection from interference is implied or afforded. The location of the Grade B contour was used to determine the assigned power for the DTV station, once again using conventional methods found in FCC Rules Section 73.699, Figures 9 and 10, determining the power necessary on a radial basis to generate the associated DTV coverage contour (41 dBu for UHF, 36 dBu for high VHF Channels 7–13, and 28 dBu for low VHF Channels 2–6), for an assigned DTV channel. The maximum power determined using this method was assigned as the DTV operating power, provided it was calculated to be above established minimum power levels; otherwise, a minimum power level was assigned. By the same token, facilities with calculated DTV power levels above the established maximum power levels for a given channel were assigned the maximum power level. The use of this method usually creates a directional DTV antenna replication pattern, even for DTV assignments to presently omnidirectional NTSC TV stations. The FCC requires that a DTV facility employ an antenna design that meets the calculated replication envelope parameters, unless, with a few exceptions, zero or *de minimus* new interference to other facilities can be demonstrated.

In addition to the use of the Grade B envelope and an assumed directional transmitting antenna for all DTV facilities, the model assumes the use of directive receiving antennas at each studied location, or "cell." The characteristics of the receiving antennas are different, not only for the low

VHF, high VHF, and UHF frequency bands, but also for NTSC and DTV receiving situations; the FCC model specifies that more directive antennas be employed for analysis of DTV reception.

The FCC analysis technique employs terrain-sensitive calculation methods based on Version 1.2.2 of the ITS Irregular Terrain Model, also known as the Longley-Rice model. For each NTSC or DTV station to be studied, a grid of cells, two kilometers on a side, fills the associated Grade B or noise-limited contour. The program first determines which of the cells is predicted to receive service from the associated station, using Longley-Rice analysis with F(50,50) statistical weighting for NTSC and F(50,90) statistical weighting for DTV stations. Cells determined to have no service are not studied for interference from other stations.* Once cells having service are determined, the software analyzes potential interference from other NTSC or DTV stations, again using the Longley-Rice propagation algorithm and defined statistical weighting for all potential interfering signals. Each cell is evaluated, as appropriate, using the desired-to-undesired ratios and methods presented in FCC Rules Section 73.622, 73.623, and 74.706 for each channel relationship, and cells determined to have interference are flagged and excluded from further study, resulting in the generation of net interference-free coverage population totals.

The TVIXSTUDY analysis program employs all of the OET-69 analysis features described above, as well as several other more subtle elements prescribed by the FCC. Additionally, the program allows modeling of implementation scenarios that involve changes to effective radiated power, antenna height, antenna pattern, channel number, and/or transmitter location. TVIXSTUDY also can identify cells that fall in major bodies of water, as based on digitized map data, excluding them from the study. The program is primarily intended to study the effects of existing/potential NTSC or DTV facilities on other DTV or NTSC facilities, as based on desired-to-undesired ratio parameters defined in OET-69. A typical TVIXSTUDY analysis summary includes technical parameters of the proposed DTV or NTSC facility, along with its original (pre-modification) technical parameters, if any. Also included is a listing of each protected DTV and/or NTSC facility or allotment with associated interference-free population tabulations and the unique interference population resulting from operation of the proposed facility. TVIXSTUDY is similar to the program TVCOVSTUDY, which instead predicts the interference-limited coverage of a selected facility.

The results of the OET-69 algorithm are dependent on the use of computer databases, including terrain, population, and FCC engineering records. FCC Rules §0.434(e) specifically disclaims the accuracy of its databases, recommending the use of primary data sources (*i.e.*, paper documents), which is not practical for DTV interference analyses. Further, while Hammett & Edison, Inc. endeavors to follow official releases and established precedents on the matter, FCC policy on DTV analysis methods is constantly changing. Thus, the results of OET-69 interference and coverage studies are subject to change and may differ from FCC results.

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* It is noted that the Longley-Rice model is not always capable of determining, within certain confidence limits, whether a particular cell has service. In such cases, the Longley-Rice algorithm returns an error code; the FCC method for handling such error codes is to assume that the associated cells have interference-free service and, as such, are not further considered. The Hammett & Edison TVIXSTUDY program reports the number of such error cells for a given study and provides the option of generating a map showing their locations, which may be useful for further review using other propagation analysis tools.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 23rd day of August, 1999, I caused a true copy of the foregoing "Comments of Mt. Mansfield Television, Inc." to be served by hand delivery upon the persons listed on the attached service list marked with an asterisk, and by first-class mail upon all other persons listed.

Michael A. McKenzie

SERVICE LIST

*John Karousos
Chief, Allocations Branch
Policy and Rules Division
Mass Media Bureau
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Mark J. Prak
Coe W. Ramsey
Brooks, Pierce, McLendon, Humphrey
& Leonard, L.L.P.
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P.O. Box 1800
Raleigh, NC 27602

*International Transcription Services, Inc.
1231 20th Street, N.W.
Washington, D.C. 20036

Mt. Mansfield Television, Inc. • Burlington, Vermont

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Mt. Mansfield Television, Inc. to prepare an engineering statement concerning the application of Hearst-Argyle Stations, Inc. to "maximize" DTV Station WPTZ-DT at Mt. Mansfield.

Background

Heart-Argyle Stations, Inc., licensee of TV Station WPTZ, Channel 5, and DTV Station WPTZ-DT, Channel 14, North Pole, New York, has proposed to construct WPTZ-DT at Mt. Mansfield, Vermont. The proposal would create a "DTV White Area" and appears to request greater ERP than is permissible under FCC Rules.

Creation of "DTV White Area"

While the term "White Area" is not yet defined for the DTV service, it is defined for radio services to mean "[t]he area or population which does not receive ... primary service from an authorized station."* The creation of such white areas therefore would conflict with the traditional television allotment priorities, as set forth in the Sixth Report and Order on Television Allocations, 41 FCC 148 (1952), namely "(1) to provide at least one television service to all parts of the United States ...."

The noise-limited threshold is the minimum signal strength, as defined in Sections 73.622(e) and 73.625(a) of the Rules, that is required to receive DTV service. The 41 dBu F(50,90) noise-limited coverage contours of all DTV stations contained in the FCC's engineering database (including pending applications) covering portions of the Adirondack Lakes area were projected in accordance with Section 73.625(b) of the Rules, and are shown in Figure 1. The 41 dBu F(50,90) coverage of Station WPTZ-DT was projected using both its allotted facilities at Terry Mountain and applied-for facilities located at Mt. Mansfield. Figure 1 shows that, were WPTZ-DT located to Mt. Mansfield, a "DTV White Area" would be created. The white area created includes 333 square kilometers, as determined by use of a polar planimeter over maps of known scale, and contains 985 persons (1990 U.S. Census).

Power Requested by WPTZ-DT Greater than Permitted by FCC Rules

The pending WPTZ-DT application seeks 700 kW at 803 meters above average terrain (AAT). For this height, Section 63.622(f)(8)(ii) permits a maximum ERP of 22.96 dBk, which is equal to 197.7 kW.

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* FCC Rules Section 73.14.

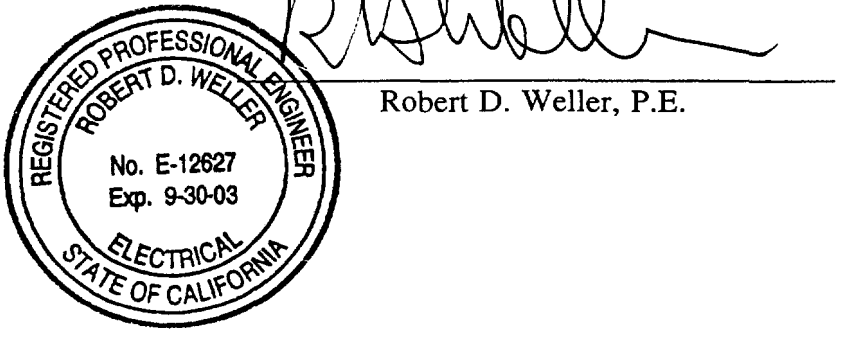
Section 73.622(f)(5) permits stations assigned a DTV channel in the initial DTV Table of Allotments to exceed the maximum permissible limits on DTV power and antenna height in order to provide the same geographic coverage area as the largest station within their market. The DTV station in the market having the largest geographic coverage area is WCAX-DT, Channel 53, which was allotted 817 kW (DA) at 835 meters AAT. The applicable coverage contour for WCAX-DT, DTV Channel 53 is the 42.2 dBu F(50,90) contour. The applicable coverage contour for WPTZ-DT, DTV Channel 14, is the 38.7 dBu F(50,90) contour.

At DTV Channel 14 and a height AAT of 803 meters, coverage equivalent to the WCAX-DT allotment is achieved at an ERP of 407.8 kW. At that power level, the applicable coverage contours both extend a distance of 126.42 km. It therefore appears that the ERP of 700 kW requested by WPTZ-DT is considerably greater than is permitted under the Rules.

List of Figures

In carrying out these engineering studies, the following attached figure was prepared under my direct supervision:

1. "DTV White Area" Showing – WPTZ-DT at Mt. Mansfield.

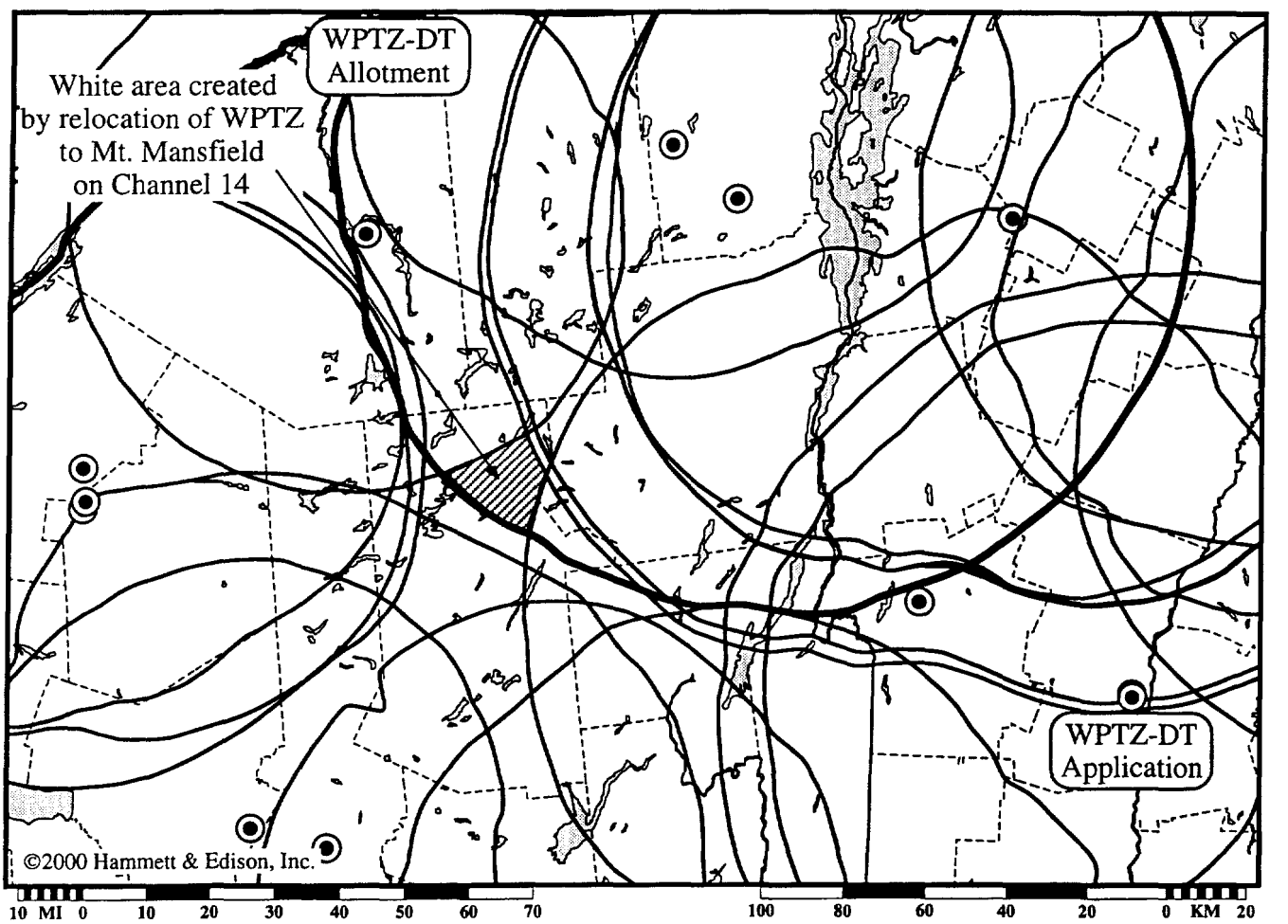


Robert D. Weller, P.E.

June 6, 2000

Mt. Mansfield Television, Inc. • Burlington, Vermont

"DTV White Area" Showing - WPTZ-DT at Mt. Mansfield on Channel 14
(20 Noise Limited Contours Shown, including WPTZ-DT)



Engineering Statement of Theodore J. Teffner re: Hearst - Argyle Maximization Application @ Mt. Mansfield

I, Theodore J. Teffner am Vice president - Engineering and Chief Engineer of Mt. Mansfield Television, Inc., licensee of WCAX-TV, Burlington, Vermont. I have been with Mt. Mansfield Television since 1966 and Chief Engineer since 1992.

I am a member of the Society of Broadcast Engineers and the Society of Motion Picture and Television Engineers. I presently serve as the President of the Vermont Association of Broadcasters.

I have been intimately involved in the preparation of development plans for DTV facilities on Mt. Mansfield, and have worked closely with all of the prospective users of the Mount Mansfield Colocation Association site. I am very familiar with all of the solutions considered for this site.

Sec III-D - DTV Engineering

RE: Antenna Location Coordinates:

The coordinates listed in the application describe a location that is not available for tower siting, and not under consideration in the present planning process. Further, a two foot contour map of the area shows that the elevation at the described location is 1211.89 meters, not 1183 meters as expressed in the application. There is an elevation of 1183 meters very near by, but it is an area of slopes greater than 45% and not suitable for any type of construction.

The attached topographic map shows the referenced locations.

RE: Proposed Maximum Effective Radiated Power:

The DTV rules specify that the minimum signal level necessary to achieve noise-limited DTV coverage is 40.8 dBu at channel 38. The dipole factor modification results in a signal level of 38.7 dBu at channel 14. Hearst - Argyle seeks authorization to replicate the coverage that would be obtained by WCAX-TV at its allocated power level of 817 KW

at ch. 53 at 835m HAAT. If one applies the dipole factor modification difference between ch 53 (42.2 dBu) and ch 14 (38.7dBu), a difference of 3.5 dB is obtained. Taking this difference into account, the Effective Radiated Power would be reduced to 365KW.

If the HAAT could actually be 803 meters as shown in the application, the Effective Radiated Power would rise to 407.8 KW. In either case the Effective Radiated Power could not be 700KW.

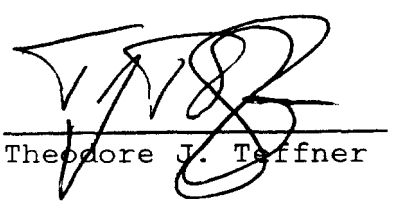
Loss of Viewers in WPTZ-TV market area:

Studies that I have conducted pursuant to the Longley-Rice model, using the V-Soft Communications Professional Signal Propogation Software, show that WPTZ-DT transmitting from Mt. Mansfield at 700KW ERP serves 20,392 persons in Franklin County, NY and 3,533 viewers in St. Lawrence County, NY. WPTZ-DT transmitting from Terry Mountain at 203 KW ERP would serve 22,080 persons in Franklin County, NY and 10,258 persons in St. Lawrence County, NY. The combined result is 8,413 fewer viewers served from Mt. Mansfield.

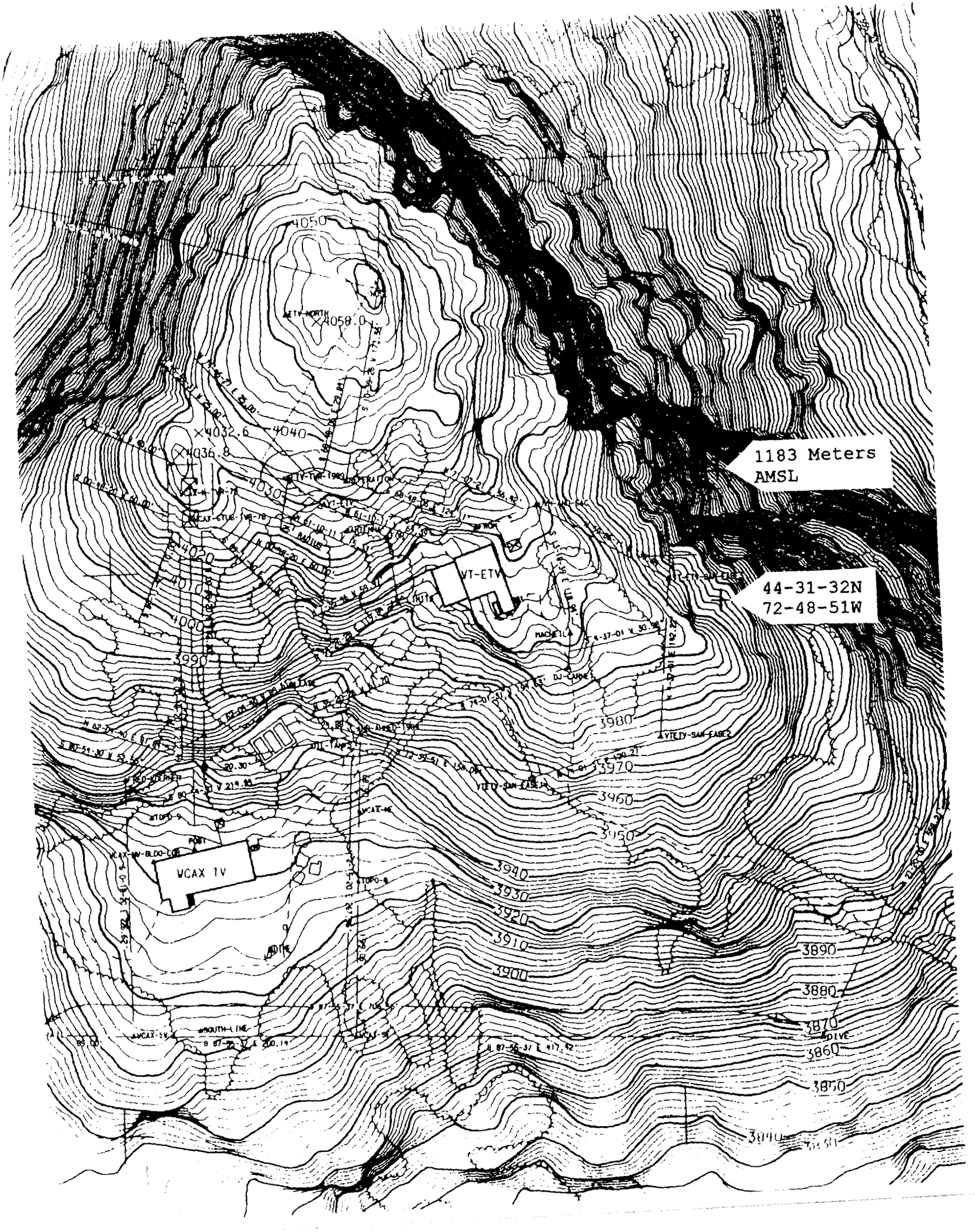
I have reviewed the foregoing petition to deny. The allegations set forth therein are true and correct to the best of my knowledge.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 6, 2000



Theodore J. Teffner


1183 Meters
AMSL
44-31-32N
72-48-51W
VT-ETV
WCAX TV
4050
4040
4030
4020
4010
4000
3990
3980
3970
3960
3950
3940
3930
3920
3910
3900
3890
3880
3870
3860
3850
3840
4058.0
4032.6
4036.8

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 7th day of June, 2000, I caused a true copy of the foregoing "Petition to Deny" to be served by first-class mail upon the person listed below.

Mark J. Prak
Brooks, Pierce, McLendon, Humphrey
& Leonard, L.L.P.
First Union Capitol Center
Suite 1600
P.O. Box 1800
Raleigh, NC 27602

William R. Richardson, Jr.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 15th day of June, 2000, I caused a true copy of the foregoing "Supplement to Comments of Mt. Mansfield Television, Inc." to be served by hand delivery upon the persons listed on the attached service list marked with an asterisk, and by first-class mail upon all other persons listed.

*John Karousos
Chief, Allocations Branch
Policy and Rules Division
Mass Media Bureau
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

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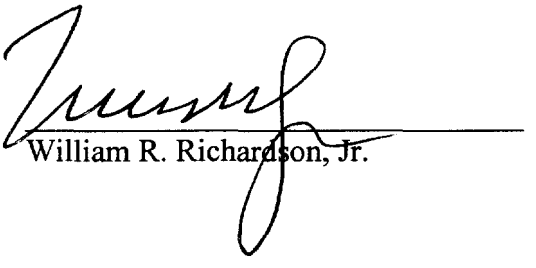

William R. Richardson, Jr.